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RADIONUCLIDE STANDARDIZATION
A Bibliography

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RADIONUCLIDE STANDARDIZATION

A Bibliography

George I. Coats

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PREFACE

As a part of its overall operations, the National Center for Radiological Health (then the Division of Radiological Health), U.S. Public Health Service, established in 1962 an Analytical Quality Control Service to evaluate the precision and accuracy of all data generated within its regional laboratory facilities. During the intervening years, the Public Health Service has been called upon to provide calibration and consultative services to laboratories in essentially every State and many of the larger cities.

In support of these activities, the staff of the Analytical Quality Control Service established in 1965 a primary radionuclide standardization facility at the Northeastern Radiological Health Laboratory. The references in this report, which are primarily concerned with methods of coincidence counting, were compiled in conjunction with this operation. Because methods for 4 pi beta counting are an integral part of this approach, references on this subject are included.

The bibliography includes references gleaned from the published literature through 1966. It is being made available in this form in response to a number of requests from individuals engaged in radionuclide counting operations at environmental surveillance laboratories. Comments and criticisms on the usefulness of this information will be welcomed.

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ABSTRACT

The bibliography contains references on absolute counting (23); coincidence technique, formula and corrections (41); calibration by beta and 4 pi beta methods (89), beta-gamma coincidence (32), gamma-gamma coincidence and gamma counting (27), x-ray-gamma coincidence (17), alpha-gamma coincidence (7), liquid scintillation counters (14), ion chambers and calorimeters (9), coincidence circuits (48); dead time and statistics (32); thin films (21); sample preparations, back scattering, and self-absorption (30); maintenance and storage of standards (9); intercomparison of solutions (7); and general references (12).

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